

**BREWER SCIENCE INC.
SAFETY DATA SHEET**

This Material Safety Data Sheet has been prepared to comply with the EC Directive, Canadian WHMIS and the OSHA Hazard Communication Standard.

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION
AND THE COMPANY/UNDERTAKING**

Product Name: WaferBOND

Manufacturer: Brewer Science, Inc.
2401 Brewer Drive
Rolla, MO 65401

Information Phone Number: (573) 364-0300 **Fax:** (573) 368-3318

Emergency Phone Number:
Chemtrec Domestic North America: (800) 424-9300
Chemtrec International: (703) 527-3887

MSDS Date of Preparation: 02/16/06

Product Use: Temporary Adhesive

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS# / EINECS#	%	EU Classification (67/548/EEC)
1-Dodecene	112-41-4 / 203-968-4	55-75	Xn R38, R65, R66, R67
2-Ethyl-1-Decene	71138-64-2 / NA	<2%	Not Applicable
2-Butyl-1-Octene	5698-48-6 / NA	<2%	Not Applicable
Resin Solids	Proprietary	30-40	Not Applicable

See Section 16 for further information on EU Classification.

SECTION 3: HAZARDS IDENTIFICATION

Liquid with a solvent odor.

EMERGENCY OVERVIEW: Combustible liquid and vapor. May cause eye and skin irritation. Inhalation of vapors may cause headache, dizziness, nausea and other symptoms of central nervous system depression.

EU Preparation Classification (1999/45/EC): Harmful (Xn) R38, R65, R66, R67

SECTION 4: FIRST AID MEASURES

Eye: Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get immediate medical attention.

Skin: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Keep the victim calm and warm. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 77.2°C (171°F)

Flammable Limits:

LEL: 0.6 vol %

UEL: 5.4 vol %

Extinguishing Media: Use water fog or spray, foam, carbon dioxide or dry chemical.

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Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

Unusual Fire Hazards: Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Vapors may form explosive mixtures with air in confined areas.

Hazardous Decomposition Products: Oxides of carbon and unknown materials.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill: Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Ventilate area. Cover with and inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated location away from incompatible materials. Keep containers closed when not in use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
1-Dodecene	None Established (PEL/TLV)
2-Ethyl-1-Decene	None Established (PEL/TLV)
2-Butyl-1-Octene	None Established (PEL/TLV)
Resin Solids	None Established (PEL/TLV)

Ventilation: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

Respiratory Protection: If needed, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures (greater than 10 times the TLV), a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Skin Protection: Impervious gloves are recommended. Based on available test data, 4H or Silver Shield gloves are suggested.

Eye Protection: Chemical safety goggles recommended.

Other Protective Equipment: Impervious clothing as needed to prevent skin contact and contamination of personal clothing. An eye wash facility and safety shower should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, colorless liquid. There is no odor threshold data available.

pH: Not available

Boiling Point: 199 - 213°C (1-Dodecene)

Vapor Pressure: 1 mm Hg @ 50°C (1-Dodecene)

Vapor Density: 5.81 (1-Dodecene)

Specific Gravity: Not available

Melting Point: Not available

Water Solubility: Insoluble

Evaporation Rate: Not available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable: X Unstable:

Incompatibility/Conditions to Avoid: ⚠ Strong oxidizing agents, acids, bases and reducing agents. Keep away from heat, sparks, flames and other sources of ignition.

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Hazardous Decomposition Products: Combustion will produce oxides of carbon and unknown materials.
Hazardous Polymerization: May Occur: Will not occur: X

SECTION 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eye: May cause slight to moderate irritation with redness and blurred vision. Corneal injury is unlikely.

Skin: May cause redness, irritation and dryness. Prolonged or repeated exposure may cause defatting and dermatitis.

Inhalation: Inhalation of vapors, mists or aerosols may cause central nervous system depression with symptoms of headache, dizziness, nausea, drowsiness and unconsciousness may also occur.

Ingestion: Swallowing may cause central nervous system depression with headache, nausea, dizziness and unconsciousness; gastrointestinal irritation with nausea, vomiting and diarrhea and injury to the lungs and brain.

Chronic Hazards: No chronic effects are anticipated.

Carcinogen Status: None of the components of this product are listed as carcinogens by OSHA, IARC or NTP.

Medical Conditions Aggravated by Exposure: Pre-existing skin diseases.

Acute Toxicity Values:

1-Dodecene:	Oral rat LD50 - 8532 mg/kg Skin rabbit LD50 - >5 gm/kg
2-Ethyl-1-Decene:	No toxicity data available.
2-Butyl-1-Octene:	No toxicity data available.
Resin Solids:	No toxicity data available.

SECTION 12: ECOLOGICAL INFORMATION

No ecological information is available.

SECTION 13: DISPOSAL INFORMATION

Dispose in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Combustible liquid, n.o.s. ERG #128
DOT Hazard Class: Combustible liquid (Excepted from HazMat in Non-Bulk Packaging)
UN Number: NA1993
DOT Labels Required (49CFR172.101): None
Hazardous Substance (49CFR172.101): None
Reportable Quantity: N/A

IATA Shipping Name: Not Regulated
IATA Hazard Class: None
UN Number: N/A
IATA Hazard Labels Required: None

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: None

SARA TITLE III:

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Hazard Category for Section 311/312: Acute Health, Fire Hazard

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None


EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed in the TSCA inventory.

STATE REGULATIONS:

California Proposition 65: These products contain the following substances known to the State of California to cause cancer and/or reproductive toxicity: None

INTERNATIONAL REGULATIONS:

European Community Labeling :

	R38 Irritating to skin R65 Harmful: may cause lung damage if swallowed R66 Repeated exposure may cause skin dryness or cracking R67 Vapors may cause drowsiness or dizziness S24 Avoid contact with the skin S36/37 Wear suitable protective clothing and gloves S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label
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SECTION 16: OTHER INFORMATION

HMIS Ratings: Health - 1* Flammability - 2 Reactivity - 0
NFPA Ratings: Health - 1 Flammability - 2 Reactivity - 0

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

Xn Harmful
R38 Irritating to skin
R65 Harmful: may cause lung damage if swallowed
R66 Repeated exposure may cause skin dryness or cracking
R67 Vapors may cause drowsiness or dizziness

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This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Brewer Science shall not be held liable for any damage resulting from handling or from contact with the above product.

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